CLAIMS

1. A container designing system using a computer for designing a shape of a hollow container, comprising:

a parametric inputting means for inputting a parametrically defined shape condition;

a storing means for storing said shape condition;

a solid model defining means for defining a three-dimensional outer shape of said hollow container as a solid model filled up with contents on the basis of said shape condition; and

a solid model editing means for subjecting said solid model to a secondary processing.

2. A container designing system as set forth in claim 1, wherein said solid model is subjected to a secondary processing after an outer shape of said hollow container is defined as a solid model.

3. A container designing system as set forth in claim 1, wherein said solid model editing means subjects said solid model to a secondary processing by using a Boolean operation for altering a shape upon calculating a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

4. A container designing system as set forth in claim 1,

wherein said solid model editing means subjects said solid model to a secondary processing by using a fillet operation for smoothly rounding an intersecting portion of one plane with the other plane.

5. A container designing system as set forth in claim 1, wherein said solid model editing means subjects said solid model to a secondary processing by using a deformable operation for altering a plane such that a positive load or a negative load is applied to the plane.

6. A container designing system as set forth in claim 1, wherein said solid model editing means subjects said solid model to a secondary processing by using a spiral operation for generating a continuous rugged shape on an exterior surface of said hollow container in an arbitrary range of an axial direction.

7. A container designing system as set forth in claim 1, further comprising a capacity modulating means for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

8. A container designing system as set forth in claim 1, wherein it is possible to subject said outer shape to a secondary

processing under the condition that a shape of a finish portion of said hollow container is fixed.

9 A container designing system as set forth in claim 7, wherein it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.

10. A container designing method using a computer for designing a shape of a hollow container, wherein a parametrically defined shape condition is inputted and a three-dimensional outer shape of said hollow container is defined as a solid model filled up with contents on the basis of said shape condition, after that, said solid model is subjected to a secondary processing.

11. A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing by using a Boolean operation for altering a shape upon calculating a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

12. A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing by using a fillet operation for smoothly rounding an intersecting portion

of one plane with the other plane.

13. A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing by using a deformable operation for altering a plane such that a positive load or a negative load is applied to the plane.

14. A container designing method as set forth in claim 10, wherein said solid model is subjected to a secondary processing by using a spiral operation for generating a continuous rugged shape on an exterior surface of said hollow container in an arbitrary range of an axial direction.

15. A container designing method as set forth in claim 10, wherein a shape modulation upon said outer shape is performed in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

16. A container designing method as set forth in claim 10, wherein it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.

17 A container designing method as set forth in claim 15,

wherein it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.

18. A container designing program for carrying out by a computer:

a parametric inputting means for inputting a parametrically defined shape condition;

a storing means for storing said shape condition;

a solid model defining means for defining a three-dimensional outer shape of a hollow container as a solid model filled up with contents on the basis of said shape condition; and

a solid model editing means for subjecting said solid model to a secondary processing.

19. A container designing program as set forth in claim 18, wherein said solid model is subjected to a secondary processing after an outer shape of said hollow container is defined as a solid model.

20. A container designing program as set forth in claim 18, wherein said solid model editing means subjects said solid model to a secondary processing by using a Boolean operation for altering a shape upon calculating a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

21. A container designing program as set forth in claim 18, wherein said solid model editing means subjects said solid model to a secondary processing by using a fillet operation for smoothly rounding an intersecting portion of one plane with the other plane.

22. A container designing program as set forth in claim 18, wherein said solid model editing means subjects said solid model to a secondary processing by using a deformable operation for altering a plane such that a positive load or a negative load is applied to the plane.

23. A container designing program as set forth in claim 18, wherein said solid model editing means subjects said solid model to a secondary processing by using a spiral operation for generating a continuous rugged shape on an exterior surface of said hollow container in an arbitrary range of an axial direction.

24. A container designing program as set forth in claim 18, wherein a capacity modulating means is comprised for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

25. A container designing program as set forth in claim 18, wherein it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.

26 A container designing program as set forth in claim 24, wherein it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.

27. A computer-accessible recording medium recording a container designing program for carrying out by a computer:

a parametric inputting means for inputting a parametrically defined shape condition;

a storing means for storing said shape condition;

a solid model defining means for defining a three-dimensional outer shape of a hollow container as a solid model filled up with contents on the basis of said shape condition; and

a solid model editing means for subjecting said solid model to a secondary processing.

28. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein said solid model is subjected to a secondary processing after an outer

shape of said hollow container is defined as a solid model.

29. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein said solid model editing means subjects said solid model to a secondary processing by using a Boolean operation for altering a shape upon calculating a logical sum (OR), a logical difference (XOR) or a logical product (AND) of two shapes.

30. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein said solid model editing means subjects said solid model to a secondary processing by using a fillet operation for smoothly rounding an intersecting portion of one plane with the other plane.

31. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein said solid model editing means subjects said solid model to a secondary processing by using a deformable operation for altering a plane such that a positive load or a negative load is applied to the plane.

32. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein said solid model editing means subjects said solid model to a secondary

processing by using a spiral operation for generating a continuous rugged shape on an exterior surface on said hollow container in an arbitrary range of an axial direction.

33. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein a capacity modulating means is comprised for performing a shape modulation upon said outer shape in order that a container capacity after a shape modulation has a capacity determined by said shape condition.

34. A computer-accessible recording medium recording a container designing program as set forth in claim 27, wherein it is possible to subject said outer shape to a secondary processing under the condition that a shape of a finish portion of said hollow container is fixed.

35 A computer-accessible recording medium recording a container designing program as set forth in claim 33, wherein it is possible to perform said shape modulation upon said outer shape under the condition that a shape of a finish portion of said hollow container is fixed.